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COMMERCIAL FERTILIZERS

Report for 1970

J. GORDON HANNA



William Glowa makes nitrogen determination.

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REPORT ON INSPECTION AND ANALYSIS OF
COMMERCIAL FERTILIZERS

1970

J. Gordon Hanna, Chief Chemist

Listed in this report for 1970 are the manufacturer's names, the number of samples of the products of each manufacturer collected, the number of these samples found deficient and the ratios of the percentages of nitrogen, phosphoric acid, potash, secondary and minor elements found to the percentages guaranteed. Results of 710 samples of fertilizer produced by 107 manufacturers are summarized. A table of the tonnage sold during the period between July 1, 1969 and June 30, 1970 is included.

Analyses were made by Messrs. R. A. Botsford, S. P. Squires, W. Glowa, R. E. West, Miss H. Kocaba and Mrs. J. A. Pierson. Inspection and sampling were by Mr. R. R. Nichols.

Cover photo by Raymond E. West.

COMPLIANCE OF 1970 FERTILIZER SAMPLES WITH GUARANTEES

| Manufacturer | No. of Samples | No. of guarantees | | | Samples deficient | | Average % of claims | | |
|-------------------------------------------|-------------------|-------------------|-------------------------------------------------------|-----|-------------------------------------------------|----|-------------------------------------------------|-------|-------------------------------------------------|
| | | N | P ₂ O ₅ +K ₂ O total | N | P ₂ O ₅ +K ₂ O | N | P ₂ O ₅ +K ₂ O | N | P ₂ O ₅ +K ₂ O |
| Adams-Brainard, Inc. | 1 | 1 | 2 | 3 | 0 | 0 | 117.6 | 134.0 | |
| Agrico Chemical Co. | 71 | 63 | 132 | 195 | 14 | 18 | 101.6 | 105.6 | |
| Agricultural Products Co., Inc. | 9 | 9 | 18 | 27 | 0 | 0 | 112.1 | 112.4 | |
| Agricultural Supply Co. | 2 | 2 | 4 | 6 | 0 | 0 | 104.0 | 125.5 | |
| Agway, Inc. | 43 | 40 | 74 | 114 | 1 | 11 | 109.7 | 108.1 | |
| The American Agricultural Chemical Co. | 1 | 0 | 1 | 1 | - | 0 | --- | 108.3 | |
| American Cyanamid Co. | 5 | 5 | 0 | 5 | 0 | - | 101.1 | --- | |
| American Fertilizer Co. | 4 | 4 | 8 | 12 | 0 | 0 | 102.5 | 126.3 | |
| Armour Agricultural Chemicals Co. | 5 | 5 | 10 | 15 | 0 | 1 | 104.7 | 107.4 | |
| Asgrow - Mandeville Co. | 7 | 7 | 14 | 21 | 0 | 0 | 102.8 | 110.9 | |
| Atlas Fish Fertilizer Co. | 3 | 3 | 5 | 8 | 0 | 0 | 105.6 | 137.1 | |
| H. J. Baker & Bros., Inc. | 1 | 0 | 0 | 0 | - | - | --- | --- | |
| Baker Castor Oil Co. | 1 | 0 | 0 | 0 | - | - | --- | --- | |
| The Bartlett Tree Expert Co. | 1 | 1 | 2 | 3 | 0 | 0 | 114.0 | 97.8 | |
| Black Magic, Inc. | 2 | 2 | 4 | 6 | 0 | 0 | 103.0 | 120.1 | |
| Bonide Chemical Co. Inc. | 1 | 1 | 2 | 3 | 0 | 0 | 107.2 | 100.3 | |
| Boyle-Midway, Inc. | 4 | 4 | 6 | 10 | 0 | 0 | 104.6 | 104.0 | |
| Bristol Nurseries, Inc. | 2 | 2 | 4 | 6 | 0 | 2 | 127.6 | 91.2 | |
| Brookside Nurseries, Inc. | 6 | 5 | 7 | 12 | 0 | 0 | 108.3 | 126.0 | |
| Cadwell & Jones, Inc. | 10 | 10 | 20 | 30 | 1 | 3 | 107.0 | 114.9 | |
| H D Campbell Co. | 1 | 1 | 0 | 1 | 0 | - | 100.0 | --- | |
| Canadian Industries Ltd. | 1 | 1 | 0 | 1 | 0 | - | 100.0 | --- | |
| Peter Cascio Nursery, Inc. | 7 | 7 | 14 | 1 | 1 | 1 | 102.1 | 104.9 | |
| Central Farmers Fertilizer Co. | 1 | 0 | 1 | 1 | - | 0 | --- | 103.0 | |

| | | | | | | | | |
|--------------------------------------|----|----|-----|-----|---|----|-------|--------|
| Chevron Chemical Co. | 8 | 8 | 14 | 22 | 0 | 0 | 110.3 | 117.1 |
| Chilean Nitrate Sales Corp. | 2 | 2 | 0 | 2 | 0 | - | 101.0 | --- |
| Clinton Nursery Products, Inc. | 2 | 2 | 4 | 6 | 0 | 0 | 106.6 | 103.1 |
| Corenco Corp. | 71 | 57 | 124 | 181 | 4 | 10 | 110.2 | 108.8 |
| Country Squire Fertilizers | 7 | 7 | 14 | 21 | 0 | 0 | 105.5 | 108.4 |
| The Danbury Garden Center | 2 | 2 | 4 | 6 | 1 | 0 | 93.0 | 106.5 |
| The Davey Tree Expert Co. | 3 | 3 | 6 | 9 | 0 | 0 | 103.8 | 137.4 |
| Doggett-Fison Co. | 1 | 1 | 2 | 3 | 0 | 0 | 104.8 | 115.8 |
| E. I. duPont de Nemours & Co. | 1 | 1 | 0 | 1 | 0 | - | 100.8 | --- |
| Eastman Gelatine Corp. | 1 | 0 | 1 | 1 | - | 0 | --- | 1104.5 |
| Elanco Products Co. | 10 | 10 | 20 | 30 | 0 | 1 | 105.8 | 107.3 |
| The Espoma Co. | 8 | 8 | 16 | 24 | 0 | 0 | 124.6 | 120.5 |
| Leon Ezzell, Inc. | 1 | 1 | 2 | 3 | 0 | 0 | 108.4 | 110.9 |
| Faesy & Besthoff, Inc. | 15 | 13 | 24 | 37 | 0 | 1 | 122.8 | 133.6 |
| Federal Chemical Co. | 15 | 15 | 30 | 45 | 2 | 5 | 106.2 | 102.6 |
| The Fer - Mel Corp. | 7 | 7 | 13 | 20 | 0 | 2 | 103.3 | 105.8 |
| Free Flow Fertilizer Co. | 4 | 4 | 8 | 12 | 0 | 0 | 111.9 | 128.9 |
| The Garden Exchange Inc. of Trumbull | 1 | 1 | 2 | 3 | 0 | 0 | 96.8 | 107.5 |
| Garden Products Co. | 2 | 2 | 4 | 6 | 0 | 0 | 105.0 | 114.5 |
| Glen Terrace Nurseries, Inc. | 2 | 2 | 4 | 6 | 1 | 0 | 95.0 | 109.3 |
| Godfrey's Garden Shop | 2 | 2 | 4 | 6 | 0 | 0 | 96.4 | 106.3 |
| Gold Star Distributors | 1 | 1 | 2 | 3 | 0 | 0 | 136.0 | 117.5 |
| W. R. Grace & Co. | 1 | 0 | 1 | 1 | - | 1 | --- | 85.5 |
| Grand Union Co. | 7 | 7 | 14 | 21 | 0 | 5 | 104.6 | 107.6 |
| The Great Atlantic & Pacific Tea Co. | 9 | 9 | 18 | 27 | 3 | 4 | 100.7 | 107.5 |
| Greenlife Products Co., Inc. | 7 | 7 | 14 | 21 | 1 | 2 | 100.2 | 98.0 |
| Green Ribbon Product Co. | 6 | 6 | 12 | 18 | 1 | 0 | 98.2 | 106.9 |
| Gro-Fast Fertilizer Associates | 3 | 3 | 6 | 9 | 0 | 0 | 101.2 | 100.7 |
| Halstead Distributing Co. | 2 | 2 | 4 | 6 | 0 | 1 | 114.0 | 105.3 |
| The Charles C. Hart Seed Co. | 6 | 6 | 12 | 18 | 0 | 0 | 115.6 | 115.1 |
| Heritage House Products | 2 | 2 | 4 | 6 | 0 | 1 | 107.7 | 109.7 |

| Manufacturer | No. of Samples | No. of guarantees | | Samples deficient | | Average % of claims | |
|-----------------------------------------|-------------------|-------------------|-------------------------------------------------------|-------------------|-------------------------------------------------|---------------------|-------------------------------------------------|
| | | N | P ₂ O ₅ +K ₂ O total | N | P ₂ O ₅ +K ₂ O | N | P ₂ O ₅ +K ₂ O |
| A. H. Hoffman, Inc. | 5 | 5 | 9 | 14 | 1 | 101.6 | 128.3 |
| The Hy-Trous Corp. | 2 | 2 | 4 | 6 | 0 | 108.2 | 139.9 |
| International Minerals & Chemical Corp. | 5 | 0 | 5 | 5 | - | --- | 100.9 |
| Kerr McGee Chemical Corp. | 69 | 57 | 114 | 171 | 9 | 105.8 | 107.5 |
| E. J. Korvett | 11 | 11 | 20 | 31 | 0 | 110.7 | 106.7 |
| Lebanon Chemical Corp. | 2 | 2 | 3 | 5 | 0 | 126.4 | 122.3 |
| The Liberty Fertilizer Group | 4 | 4 | 8 | 12 | 1 | 99.6 | 107.5 |
| Limestone Products Corp. | 1 | 1 | 2 | 3 | 0 | 108.0 | 97.5 |
| Loft's Pedigreed Seed, Inc. | 4 | 4 | 8 | 12 | 0 | 99.6 | 96.0 |
| Luzerne Fertilizer Co. | 5 | 5 | 10 | 15 | 1 | 99.3 | 109.3 |
| McArle's Seed Co. | 2 | 2 | 4 | 6 | 0 | 101.4 | 135.3 |
| Miller Chemical & Fertilizer Co. | 4 | 4 | 7 | 11 | 0 | 117.0 | 112.0 |
| Nassau Garden, Inc. | 7 | 7 | 14 | 21 | 1 | 119.9 | 114.1 |
| Natural Plant Food Co., Inc. | 2 | 2 | 4 | 6 | 0 | 114.0 | 91.9 |
| Old Deerfield Fertilizer Co. | 6 | 6 | 12 | 18 | 1 | 102.9 | 107.9 |
| Old Fox Agricultural Sales, Inc. | 31 | 29 | 61 | 90 | 3 | 108.2 | 111.1 |
| Olin Corp. | 2 | 2 | 2 | 4 | 0 | 102.7 | 102.5 |
| Organic Compost Corp. of Penn. | 7 | 7 | 14 | 21 | 0 | 173.9 | 190.5 |
| Palmetto Oil Co. | 1 | 0 | 0 | 0 | - | --- | --- |
| Patco Products, Inc. | 4 | 4 | 8 | 12 | 0 | 111.5 | 113.1 |
| Pennsylvania Dutch Fertilizer Co. | 10 | 10 | 20 | 30 | 0 | 115.2 | 108.6 |
| Perk-Up Products Co. | 5 | 5 | 10 | 15 | 1 | 97.6 | 94.7 |
| Robert B. Peters Co., Inc. | 1 | 1 | 2 | 3 | 0 | 113.2 | 107.4 |

| | | | | | | | | |
|----------------------------------|----|----|----|----|---|---|-------|-------|
| Planters Peanuts | 2 | 2 | 0 | 2 | 0 | 0 | 114.8 | --- |
| Frank S. Platt Co. | 2 | 2 | 4 | 6 | 1 | 1 | 91.4 | 115.1 |
| Frank Policastro & Sons, Inc. | 1 | 1 | 2 | 3 | 1 | 0 | 86.4 | 105.0 |
| Ra-Pid-Gro Corporation | 1 | 1 | 2 | 3 | 0 | 0 | 101.4 | 102.9 |
| Ross Daniels, Inc. | 4 | 4 | 8 | 12 | 0 | 0 | 114.4 | 115.0 |
| Schultz Co. | 1 | 1 | 2 | 3 | 0 | 0 | 116.8 | 99.1 |
| O. M. Scott & Sons Co. | 17 | 17 | 32 | 49 | 0 | 0 | 103.6 | 108.7 |
| Sears Roebuck & Co. | 18 | 18 | 34 | 52 | 2 | 1 | 124.0 | 109.9 |
| Sewerage Commission of Milwaukee | 2 | 2 | 2 | 4 | 0 | 0 | 112.0 | 149.0 |
| Sierra Chemical Co. | 5 | 5 | 9 | 14 | 0 | 0 | 105.0 | 103.2 |
| Smith Douglass Division | 5 | 4 | 9 | 13 | 0 | 0 | 112.0 | 112.0 |
| Southwest Potash Corp. | 1 | 1 | 1 | 2 | 0 | 0 | 107.4 | 100.5 |
| The Stadler Fertilizer Co. | 1 | 1 | 2 | 3 | 0 | 0 | 104.8 | 102.7 |
| Sterns Garden Products, Inc. | 4 | 4 | 8 | 12 | 0 | 0 | 102.4 | 105.9 |
| Stokle, Inc. | 3 | 3 | 6 | 9 | 0 | 0 | 189.3 | 216.0 |
| Swift Agricultural Chemicals | 16 | 16 | 32 | 48 | 0 | 5 | 105.5 | 102.1 |
| Swiss Farms, Inc. | 5 | 5 | 10 | 15 | 0 | 0 | 108.1 | 113.7 |
| Two Guys | 7 | 7 | 14 | 21 | 1 | 1 | 106.2 | 100.3 |
| Universal Chemical Co., Inc. | 3 | 3 | 6 | 9 | 0 | 0 | 104.1 | 116.0 |
| USS Agri-Chemical, Inc. | 11 | 10 | 18 | 28 | 3 | 2 | 97.9 | 108.9 |
| Vaughan's Seed Co. | 2 | 2 | 4 | 6 | 1 | 0 | 93.0 | 115.4 |
| Vigoro | 1 | 1 | 2 | 3 | 1 | 1 | 85.8 | 101.2 |
| Vittner's Garden Center, Inc. | 1 | 1 | 2 | 3 | 0 | 0 | 105.2 | 108.3 |
| Vornado, Inc. | 3 | 3 | 6 | 9 | 0 | 0 | 177.3 | 194.7 |
| Walker-Gordon Laboratory Co. | 2 | 2 | 4 | 6 | 0 | 0 | 118.0 | 122.1 |
| Western Auto Supply Co. | 1 | 1 | 2 | 3 | 1 | 0 | 92.0 | 132.8 |
| Andrew Wilson, Inc. | 1 | 1 | 2 | 3 | 0 | 1 | 136.4 | 117.5 |
| S. D. Woodruff & Sons, Inc. | 1 | 1 | 2 | 3 | 0 | 0 | 119.2 | 104.2 |
| Zayre Corp. | 1 | 1 | 2 | 3 | 1 | 0 | 96.0 | 107.0 |

SECONDARY AND MINOR ELEMENTS

| | No. of Samples | Element guaranteed | No. of guarantees | Guarantees deficient | Ave. % of claim |
|-----------------------------|-------------------|-----------------------|----------------------|-------------------------|--------------------|
| Agrico Chemical Co. | 7 | Boron | 4 | 0 | 556 |
| | | Magnesium | 3 | 1 | 223 |
| Agway, Inc. | 9 | Boron | 8 | 0 | 155 |
| | | Magnesium | 1 | 0 | 308 |
| Asgrow-Mandeville Co. | 1 | Boron | 1 | 1 | 61 |
| | | Calcium | 1 | 1 | 67 |
| | | Copper | 1 | 0 | 114 |
| | | Iron | 1 | 0 | 100 |
| | | Magnesium | 1 | 0 | 102 |
| | | Manganese | 1 | 1 | 62 |
| | | Sulfur | 1 | 0 | 227 |
| Boyle-Midway, Inc. | 1 | Boron | 1 | 0 | 79 |
| Cadwell & Jones, Inc. | 1 | Magnesium | 1 | 0 | 374 |
| | | | | | |
| H. D. Campbell Co. | 1 | Calcium | 1 | 1 | 40 |
| | | Magnesium | 1 | 1 | 24 |
| Chevron Chemical Co. | 4 | Copper | 1 | 0 | 114 |
| | | Iron | 3 | 3 | 50 |
| | | Sulfur | 2 | 0 | 88 |
| | | Zinc | 1 | 0 | 121 |
| Chilean Nitrate Sales Corp. | 2 | Sodium | 2 | 0 | 100 |
| Corenco Corp. | 1 | Magnesium | 1 | 0 | 89 |

| | | | | | |
|-----------------------------------------|---|------------------------------|-------------|-------------|-------------------|
| Elanco Products Co. | 1 | Iron | 1 | 0 | 640 |
| Faesy & Besthoff, Inc. | 1 | Iron | 1 | 0 | 100 |
| Federal Chemical Co. | 3 | Iron Magnesium | 1 2 | 0 0 | 386 155 |
| International Minerals & Chemical Corp. | 1 | Magnesium Sulfur | 1 1 | 0 0 | 110 102 |
| Limestone Products Corp. | 1 | Calcium Iron Magnesium | 1 1 1 | 0 0 0 | 106 100 220 |
| Loft's Pedigreed Seed, Inc. | 1 | Iron | 1 | 0 | 383 |
| Nassau Garden, Inc. | 3 | Calcium Iron | 1 2 | 0 0 | 150 107 |
| Old Fox Agricultural Sales, Inc. | 3 | Magnesium | 3 | 0 | 144 |
| Patco Products, Inc. | 1 | Iron | 1 | 0 | 100 |
| Ross Daniels, Inc. | 1 | Iron | 1 | 0 | 210 |
| Sewerage Commission of Milwaukee | 1 | Iron | 1 | 0 | 127 |
| Swift Agricultural Chemicals | 1 | Iron | 2 | 0 | 355 |

TONNAGES OF FERTILIZER MATERIALS AND MIXED
FERTILIZERS PURCHASED DURING THE PERIOD
OF JULY 1, 1969 - JUNE 30, 1970

| | <u>Tonnage</u> |
|---------------------------------|----------------|
| I. Chemical Nitrogen | |
| Ammonia anhydrous | 2 |
| Ammonium nitrate | 298 |
| Ammonium sulfate | 19 |
| Cyanamid | 19 |
| Calcium nitrate | 12 |
| Nitrate of soda | 123 |
| Nitrogen solutions | 158 |
| Urea | 387 |
| Urea-form | 12 |
| | <hr/> 1030 |
| II. Organics | |
| Cottonseed meal | 16 |
| Dried manures | 1551 |
| Sewage sludge | 58 |
| Castor pomace | 18 |
| | <hr/> 1643 |
| III. Phosphates | |
| Diammonium phosphate | 3 |
| Bonemeal | 182 |
| Superphosphate, 20% | 1305 |
| Superphosphate, 46% | 524 |
| | <hr/> 2014 |
| IV. Potash | |
| Cotton hull ashes | 30 |
| Muriate of potash | 2357 |
| Nitrate of soda-potash | 1 |
| Sulfate of potash | 1 |
| Sulfate of potash-magnesia | 22 |
| Potassium nitrate | 10 |
| | <hr/> 2421 |
| V. Secondary and micronutrients | |
| Borax | 16 |
| Copper sulfate | 1 |
| Magnesium sulfate | 3 |
| | <hr/> 20 |
| VI. Mixed Fertilizers | |
| Commercial Mixtures | 34,895 |
| Special and home mixtures | 2,332 |
| | <hr/> 37,227 |
| Total | 44,355 |

MIXED FERTILIZER DISTRIBUTION
JULY 1, 1969 - JUNE 30, 1970

| <u>Grade</u> | <u>Tons</u> | <u>Grade</u> | <u>Tons</u> |
|--------------|-------------|----------------|-------------|
| 0-10-30 | 118 | 10-10-10 | 6572 |
| 0-15-30 | 639 | 10-20-10 | 357 |
| 5- 4-0 | 60 | 10-20-20 | 607 |
| 5-10-5 | 1013 | 12- 4-8 | 209 |
| 5-10-10 | 3094 | 15-10-10 | 3379 |
| 6- 3-6 | 1541 | 15-15-15 | 708 |
| 7- 7-7 | 51 | 16- 8-8 | 98 |
| 8- 6-4 | 245 | 20-10-5 | 92 |
| 8-10-10 | 2285 | 20-10-10 | 80 |
| 10-6-4 | 2953 | Miscellaneous* | 10,894 |
| | | Total | 34,895 |

*Small amounts or reported by less than three manufacturers.

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NEW HAVEN, CONNECTICUT 06504

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Director

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